

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Previously presented) A device for mixing at least two media, having at least one mixing chamber, wherein a wall of the at least one mixing chamber has at least one temperature control channel, which is separate and discrete from the at least one mixing chamber, for feeding or removing energy to or from the at least one mixing chamber.
2. (Previously presented) The device as claimed in claim 1, wherein energy can be fed to or removed from the at least one mixing chamber electrically through the at least one temperature control channel.
3. (Previously presented) The device as claimed in claim 1, wherein energy can be fed to or removed from the at least one mixing chamber convectively by means of a temperature control medium through the at least one temperature control channel.
4. (Previously presented) The device as claimed in claim 1, wherein the device has at least one reaction chamber for a chemical reaction between the at least two media.
5. (Previously presented) The device as claimed in claim 4, wherein a wall of the at least one reaction chamber is provided with at least one catalyst material or consists of a catalyst material.

6. (Previously presented) The device as claimed in claim 4, wherein at least one mixing chamber is integrated in the at least one reaction chamber.

7. (Currently amended) The device as claimed in claim 1, wherein the at least one mixing chamber has a main direction of flow through it.

8. (Previously presented) The device as claimed in claim 7 wherein at least one temperature control channel runs substantially parallel to the main direction of flow of the at least one mixing chamber.

9. (Previously presented) The device as claimed in claim 7, wherein at least one temperature control channel runs substantially transversely with respect to the main direction of flow of the at least one mixing chamber.

10. (Previously presented) The device as claimed in claim 1, wherein at least one mixing chamber is provided with at least one turbulator.

11. (Previously presented) The device as claimed in claim 3, wherein an inlet is provided for each of the at least two media and also for the temperature control medium, and wherein an outlet is provided for in each case at least one mixing and/or reaction product and for the temperature control medium.

12. (Previously presented) The device as claimed in claim 4, wherein the wall of the at least one mixing chamber comprises a

plurality of plates and/or sheets bearing against one another, with the at least one temperature control channel, and the at least one mixing chamber and the at least one reaction chamber being formed by cutouts in the plates or sheets.

13. (Previously presented) The device as claimed in claim 12, wherein two outermost plates of the plurality of plates can be connected to one another by means of a holding device.

14. (Previously presented) The device as claimed in claim 12, wherein at least one of the plurality of plates or sheets is between 0.05 mm and 1.5 mm thick.

15. (Previously presented) The device as claimed in claim 12, wherein the cutouts in the plurality of plates or sheets are between 1 mm and 10 mm wide.

16. (Previously presented) The device as claimed in claim 1, wherein at least one component of the device consists of a metal, of a stainless steel, of an alloy, or of a plastic.

17. (Previously presented) The device as claimed in claim 1, wherein the device is brazed with a brazing solder which contains nickel, gold, silver and/or copper.

18. (Previously presented) The device as claimed in claim 1, wherein the device is welded or adhesively bonded.

19. (Previously presented) The device as claimed in claim 4, wherein the reaction chamber is in channel form.

20. (Previously presented) The device as claimed in claim 7, wherein the reaction chamber is in channel form.

21. (Previously presented) The device as claimed in claim 10, wherein the turbulator is a transverse web.

22. (Previously presented) The device as claimed in claim 14, wherein the sheets or plates are between 0.2 mm and 1.5 mm thick.

23. (Previously presented) The device as claimed in claim 15, wherein the cutouts are between 2 mm and 10 mm wide.

24. (Previously presented) The device as claimed in claim 18, wherein the device is diffusion welded.

25. (Previously presented) The device as claimed in claim 4, wherein the at least one mixing chamber is defined by cutouts in a plurality of plates and/or sheets bearing against one another, and wherein the at least one temperature control channel is defined by additional cutouts in the plurality of plates and/or sheets.

26. (Previously presented) The device as claimed in claim 25, wherein at least one of the plates and/or sheets has at least one cutout defining the mixing chamber and at least one cutout defining the temperature control channel.

27. (New) The device as claimed in claim 1, wherein the mixing chamber is defined by distribution channels and cut-outs in a plurality of plates or sheets bearing against one another, and

wherein the plurality of plates or sheets which have the distribution channels and cut-outs also have cut-outs for defining the at least one temperature control channel.

28. (New) The device as claimed in claim 27, further comprising at least one distribution chamber passing through the plurality of plates or sheets that contain the distribution channels and cut-outs which define the mixing chamber, and at least one collection chamber also passing through the plates or sheets which have the distribution channels and cut-outs which define the mixing chamber, and wherein the distribution channels and cut-outs connect the at least one distribution chamber to the at least one collection chamber.

29. (New) The device as claimed in claim 28, wherein the distribution channels and cut-outs are formed along planar surfaces of the plurality of plates or sheets, and wherein the distribution chamber and the collection chamber extend perpendicularly through the plurality of plates or sheets that have distribution channels and cut-outs to define the mixing chamber.